Vercelli, Francesco.
Nuovi esperimenti di previsioni meteorologiche. Roma. 1923. 80 p. diagr. plates. 23 cm. (Rivista marittima. Suppl. al fasc. Marzo 1923.)

Wallén, Axel.
Årets skördeutsikter från väderlekssynpunkt. Stockholm. 1923. [1 p.] 30 cm. (Särtryck ur Landtmannen, Tidskrift för Landtmän. 1923.)

Williams, C. B.
Short bio-climatic study in the Egyptian desert. Cairo. 1923. 20 p. plates. 27½ cm. (Ministry of agric., Egypt. Tech. & sci. serv., Bulletin no. 29.)

RECENT PAPERS BEARING ON METEOROLOGY AND SEISMOLOGY.

C. FITZHUGH TALMAN, Meteorologist in Charge of Library.

The following titles have been selected from the contents of the periodicals and serials recently received in the library of the Weather Bureau. The titles selected are of papers and other communications bearing on meteorology and cognate branches of science. This is not a complete index of all the journals from which it has been compiled. It shows only the articles that appear to the compiler likely to be of particular interest in connection with the work of the Weather Bureau.

Aerial age. New York. v. 16. June, 1923.
Aerological aid for aviators. p. 276–278.

Annalen der Hydrographie und maritimen Meteorologie. Hamburg. 51. Jahrg. März 1923.
Köppen, Wladimir. Nebel auf dem Roten Meer. p. 76.

Astrophysical journal. Chicago. v. 57. May, 1923.
Babcock, Harold D. A study of the green auroral line by the interference method. p. 209–221.

Cuba. Observatorio nacional. Boletin. Habana. v. 19. Febrero 1923.
Bowie, E. W. Mapas mas extensos de observationes sinopticas del tiempo, y algunas inferencias que ellas permiten. p. 26–30.
Millás, José Carlos. Algunas observaciones de nubes importantes en el estu estudio de perturbaciones tropicales. p. 21–25.

Discovery. London. v. 4. June, 1923.
Brown, R. N. Rudmose. Plant life in the Antarctic. p. 149–153. [Red and yellow snow, p. 150.]
Dow, J. S. Invisible light. Its physiological effects and practical applications. p. 158–162.

Ecology. Brooklyn, N. Y. v. 4. April, 1923.
Burns, George P. Measurement of solar radiation energy in plant habitats. p. 189–195.

France. Académie des sciences. Comptes rendus. t. 176. 1923.
Schereschewsky, Ph., & Wehrle, Ph. Étude des nuages par photographie synoptique. (Semaine des nuages.) p. 1405–1407. (14 mai.)
Vegard, L. Sur la constitution des couches supèrieures de l'atmosphère. p. 1488–1491. (22 mai.)

Geographische Zeitschrift. Leipzig. 29. Jahrg. 2. H. 1923.
Eckardt, Wilh. R. Karl Dove. p. 81–84. [Obituary.]
Treumer, Heinrich. Regenverteilung, Pflanzendecke und Besiedelung des Berglandes von Guayana. p. 95–115.
Wegner, Rudolf. Klimaprovinzen von Deutschland. p. 128–130.

Imperial marine observatory. Kobe. v. 1. March, 1923.
Horiguti, Y. On the rate of ascent of rubber balloons. p. 37–51.
Okada, T. On the surface temperature of the Japan sea. p. 66–83.
Suda, K. On the energy dissipation of the main wave of a near earthquake. p. 52–65.

Literary digest. New York. v. 77. June 9, 1923.
The milky way as an ice house. p. 26. [Abstr. from art. by Hanns Fischer on alleged cosmic origin of hail.]

Nation's business. Washington, D. C. v. 11. April, 1923.
Willoughby, Raymond. Wet and dry from a new angle. p. 39–40. [Describes work of U. S. Weather bureau.]

National academy of sciences. Proceedings. Washington, D. C. v. 9. June, 1923.
Abbott, C. G., & colleagues. The solar prelude of an unusual winter. p. 194–198.

Nature. London. v. 111. 1923.
Shaw, Napier. Vertical change of wind and tropical cyclones. p. 702–703. (May 26.)
Capt. C. H. Ryder. p. 749. (June 2.) [Obituary.]
[Simpson, George C.] The meteorology of Scott's last journey. p. 758–759. (June 2.) [Abstract.]
Mill, Hugh Robert. Mr. M. de C. S. Salter. p. 780–781. (June 9.) [Obituary.]

Naturwissenschaften. Berlin. 11. Jahrg. 11. Mai 1923.
König. Die neueren Anschauungen über Wesen und Aufbau der Zyklonen. p. 359–360. [Abstract.]

Popular science monthly. N. Y. v. 51. July, 1923.
Scarr, James H. The truth about the weather. p. 54–56.

Reale accademia dei Lincei. Atti. Roma. (5) Rendiconti. v. 32. 1923.
Andrissi, Giovanni L. Preliminari alla determinazione della estinzione della luce stellare nell' atmosfera di Roma. p. 335–338. (fasc. 7.)
Agamennone, G. Il terremoto dell' Erzegovina del 15 marzo 1923 e sua ripercussione in Italia. p. 386–390. (fasc. 8.)

Royal society of London. Proceedings. London. Ser. A. v. 103. May 3, 1923.
Lindemann, F. A., & Dobson, G. M. B. A note on the temperature of the air at great heights. p. 339–342.

Science. New York. v. 57. June 15, 1923.
West Indian hurricanes. Suppl. p. x. [Résumé of study by C. L. Mitchell.]

Science and invention. New York. v. 11. July, 1923.
Forecasting weather by radio. p. 257. [Summary of experiments by Rothé with thunderstorm-recorder.]

Società meteorologica italiana. Bolletténo bimensuale. Torino. v. 41. Aprile-giugno 1923.
Crestani, G. Le nubi cirriformi. p. 1–30.
Ossat, Gioacchino De Angelis d'. La stazione geotermica di Perugia. p. 34–37.
Signore, F. La pioggia torrenziale del 4 Novembre 1922. p. 37–39.

Technique Aéronautique. Paris. 14. année. 15 mai 1923.
Idrac, P. Remarques sur le vol de l'albatros et sur un procédé simple d'étudier les variations d'inclinaison du vent. p. 602–606.

SOLAR OBSERVATIONS.

SOLAR AND SKY RADIATION MEASUREMENTS DURING JUNE, 1923.

By HERBERT H. KIMBALL, In Charge, Solar Radiation Investigations.

For a description of instruments and exposures, and an account of the method of obtaining and reducing the measurements, the reader is referred to this REVIEW for April, 1920, **48**: 225, and a note in the REVIEW for November, 1922, **50**: 595.

From Table 1 it is seen that direct solar-radiation intensities averaged decidedly below the normal value for June at Washington, D. C., and close to normal at Madison, Wis., and Lincoln, Nebr. But few measurements were obtained at the two latter stations, due to the prevalence of cloudy conditions. The low values obtained at Washington were due to the hazy condition of the atmosphere.

Table 2 shows that slightly more than the average solar and sky radiation for June was received during the month on a horizontal surface at Washington, slightly less at Madison, and decidedly less than the average at Lincoln.

Skylight-polarization measurements obtained at Washington on 11 days give a mean of 40 per cent, with a maximum of 56 per cent on the 30th. At Madison, measurements obtained on 5 days give a mean of 52 per cent, with a maximum of 65 per cent on the 30th. These are slightly below average values for June at the respective stations.

TABLE 1.—*Solar radiation intensities during June, 1923.*

[Gram-calories per minute per square centimeter of normal surface.]

Washington, D. C.

Date.	Sun's zenith distance.										
	8 a.m.	77.8°	75.7°	70.7°	60.0°	0.0°	60.0°	70.7°	75.7°	77.8°	Noon.
	75th mer. time.	Air mass.									Local mean solar time.
		A. M.					P. M.				
	e.	5.0	4.0	3.0	2.0	*1.0	2.0	3.0	4.0	5.0	e.
	mm.	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*mm.*
June 1	11.38					1.03	0.81				13.13
2	12.68		0.34	0.44	0.60	0.94	0.69				14.10
4	15.65			0.44	0.68	0.97	0.78	0.65			15.65
5	16.79					1.12					17.37
8	13.61					1.20					10.21
9	6.76			0.80	0.97	1.21					7.04
14	9.83					0.76	0.76	0.65			10.97
15	12.24			0.43	0.67	1.02					12.68
16	10.97		0.43	0.57	0.79						12.68
18	13.13		0.55	0.71	0.88	1.00					14.60
19	15.11		0.31	0.45	0.63	0.99		0.46			18.59
20	17.96			0.24	0.39						17.96
21	17.37							0.65			15.11
22	16.20				0.65	0.88	0.26				16.20
26	16.79		0.59	0.74	0.89	1.09					16.79
27	12.24		0.56	0.73	0.94						10.21
30	8.48				0.97						6.76
Means			0.46	0.56	0.76	1.02	0.66	0.60			
Departures			−0.16	−0.15	−0.12	−0.20	−0.27	−0.15			

Madison, Wis.

June 13	11.81				0.86						12.24
14	14.10				0.90						15.65
19	17.37				1.00						15.65
21	17.96				0.85						18.59
22	18.59				0.99						17.37
23	17.96				0.75						17.37
26	11.38					1.15					9.83
27	13.13					1.35					15.11
29	7.29					1.43					7.04
30	8.81		0.89	1.00	1.11	1.37					12.24
Means			(0.89)	(1.00)	0.92	1.40					
Departures			+0.02	+0.04	−0.17	+0.09					

TABLE 1.—*Solar radiation intensities during June, 1923*—Continued.

Lincoln, Nebr.

Date.	Sun's zenith distance.										
	8 a.m.	78.7°	75.7°	70.7°	60.0°	0.0°	60.0°	70.7°	75.7°	78.7°	Noon.
	75th mer. time.	Air mass.									Local mean solar time.
		A. M.					P. M.				
	e.	5.0	4.0	3.0	2.0	*1.0	2.0	3.0	4.0	5.0	e.
	mm.	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*mm.*
June 19	17.37					1.30	1.07	0.84	0.70		19.23
20	17.96		0.72	0.83	1.02						18.59
22	17.37			0.93	1.09						16.20
24	15.11			0.93	1.11	1.34					17.37
25	15.65		0.80	0.94	1.11	1.28	1.13	1.00	0.89		19.89
29	7.87		0.85	1.07	1.17						8.18
Means			0.79	0.94	1.10	1.31	(1.10)	(0.92)	(0.80)		
Departures			+0.05	+0.02	+0.02	−0.04	+0.01	+0.02	+0.04		

*Extrapolated.

TABLE 2.—*Solar and sky radiation received on a horizontal surface.*

Week beginning.	Average daily radiation.			Average daily departure for the week.			Excess or deficiency since first of year.		
	Washington.	Madison.	Lincoln.	Washington.	Madison.	Lincoln.	Washington.	Madison.	Lincoln.
	cal.	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*
June 4	592	396	338	+90	−107	−199	−1,785	+925	+580
11	413	527	432	−101	+10	−120	−2,490	+997	−259
18	534	561	563	+12	+30	−12	−2,407	+1,205	−340
25	564	561	568	+44	+22	−16	−2,102	+1,359	−452

WEATHER OF NORTH AMERICA AND ADJACENT OCEANS.

NORTH ATLANTIC OCEAN.

By F. A. YOUNG.

The average pressure for the month was most unevenly distributed, as compared with the normal, as shown by observations made at land stations on the coasts and islands of the North Atlantic. At St. Johns, Newfoundland, the average barometric reading for June was about 0.25 inch below the normal, and on the Canadian and New England coasts the negative departures ranged from 0.12 to 0.15 of an inch. On the American coast, south of New York, as well as in the Bermudas, small departures occurred, while in the Azores and British Isles the pressure was considerably higher than usual.

Fog was unusually prevalent during the month, especially over the Grand Banks and along the American coast, north of the 35th parallel. It was reported on 19 days in the 5-degree square between latitudes 40°–45° N., longitudes 45°–50° W., on 20 days between latitudes 40°–45° N., longitudes 60°–65° W., and on 18 days in the square immediately to the westward of the latter. According to reports received the number of days on which fog occurred was also greater than usual over the eastern section of the steamer lanes and along the European coast, north of the 45th parallel.

With the exception of July, June is ordinarily the quietest month of the year over the North Atlantic. During the month under discussion the number of days with winds of gale force was somewhat greater than usual over the middle-western section of the ocean, due primarily to the cyclonic disturbance in the last decade of the month, that will be referred to later.

From the 1st to the 3d a well-developed depression was over Newfoundland and gales were reported from a limited area in the southerly quadrants. Storm logs:

Italian S. S. *Alberta:*

Gale began on May 31, wind S, 5. Lowest barometer 29.51 inches at 12:30 a. m. on the 1st, wind SW., 9, in latitude 36° 40′ N., longitude 50° 05′ W. End at noon on the 1st, wind NW. Highest force of wind 9; shifts S.-SW.-W.

American S. S. *Afel:*

Gale began on the 2d, wind SW. Lowest barometer 29.96 inches at noon on the 2d, wind SW., 7, in latitude 38° 38′ N., longitude 54° 04′ W. End on the 3d, wind W. Highest force of wind 8; shifts SW.–W.

Reports were received of moderate gales on the 1st over the region between Hatteras and the Bahamas, and on the same date they were also reported between the 20th meridian and the coast of France; comparatively high barometric readings prevailed in both localities.

From the 4th to the 7th moderate weather was the rule, except for a few sporadic winds of gale force.

On the 8th there was a well-developed disturbance central near latitude 45° N., longitude 35° W. On the same day a second LOW appeared with the center somewhere near latitude 57° N., longitude 15° W., although not enough observations have been received for an accurate determination. A number of gale reports were received from vessels in the region between the 45th meridian and the European coast. By the 9th these two depressions had apparently joined forces, and on that date as well as the 10th, the center was not far from the north coast of Scotland. Storm logs:

British S. S. *Tacoma:*

Gale began on the 7th, wind W. Lowest barometer 29.44 inches at 8 p. m. on the 8th, wind N., 9, in latitude 46° 26′ N., longitude 30° 20′ W. End on the 9th, wind NW. Highest force of wind 9; steady NW.